

Ordinance No. 4414
An Ordinance Amending
the Development Code Chapters 60 and 90
(Ordinance No. 2050 as amended through Ordinance
4265)
Related to TA2006-0009

WHEREAS, Metro conducted an inventory of fish and wildlife habitat pursuant to Statewide Planning Goal 5;

WHEREAS, Metro determined that Classes I and II riparian habitat and Class A upland wildlife habitat are regionally significant resources; and

WHEREAS, the City of Beaverton collaborated with local governments in the Tualatin River Basin to form the Tualatin Basin Partners for Natural Places; and

WHEREAS, the Tualatin Basin Partners for Natural Places, through an intergovernmental agreement with Metro, agreed to use the Metro Inventory and to conduct an Environmental, Social, Economic, and Energy consequences analysis and develop a program pursuant to Statewide Planning Goal 5 regulations; and

WHEREAS, the Tualatin Basin Partners for Natural Places developed a voluntary program that facilitates and encourages habitat friendly development practices and low impact development techniques; and

WHEREAS, on October 18, 2006, the Planning Commission unanimously recommended approval of the proposed CPA 2006-0012 application based upon the Staff Report dated September 11, 2006, for the October 11, 2006, Public Hearing, the Supplemental Staff Report dated October 6, 2006, and Staff Memoranda dated October 13, 2006, and October 18, 2006, that presented the final draft amendment, addressed approval criteria, and made findings that demonstrated that adoption of the proposed ordinance would comply with applicable approval criteria; and

WHEREAS, the final order was prepared memorializing the Planning Commission's decision and no appeal therefrom has been taken; now, therefore,

THE CITY OF BEAVERTON ORDAINS AS FOLLOWS:

Section 1. Chapters 60 and 90 of the Development Code (Ordinance No. 2050 as amended through Ordinance No. 4265) are hereby amended and set forth in Exhibit A and incorporated herein by reference.

Section 2. All Development Code provisions adopted prior to this Ordinance which are not expressly amended herein shall remain in full force and effect.

Section 3. Severability. It shall be considered that it is the legislative intent, in the adoption of this Ordinance, that if any part of the ordinance should be determined by

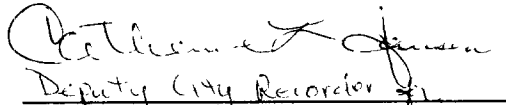
any tribunal of competent jurisdiction, i.e., the Land Use Board of Appeals or the Land Conservation and Development Commission to be unconstitutional, contrary to other provision of law, or not acknowledged as in compliance with applicable statewide planning goals, the remaining parts of the ordinance shall remain in force and acknowledged unless: (1) the tribunal determines that the remaining parts are so essential and inseparably connected with and dependent upon the unconstitutional or unacknowledged part that it is apparent the remaining parts would not have been enacted without the unconstitutional or unacknowledged part; or (2) the remaining parts, standing alone, are incomplete and incapable of being executed in accordance with legislative intent.

First reading this 13th day of November, 2006.

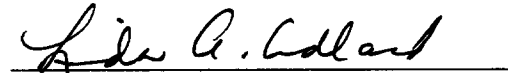

Passed by the Council this 4th day of December, 2006.

Approved by the Mayor this 6th day of December, 2006.

ATTEST:


Deputy City Recorder
SUE NELSON, City Recorder

APPROVED:


ROB DRAKE, Mayor


60.12. HABITAT FRIENDLY DEVELOPMENT PRACTICES

- 60.12.05. Purpose.** Allow and encourage Habitat Friendly Development Practices (HFDPs) that integrate preservation, enhancement and creation of Habitat Benefit Areas (HBAs) and use of Low Impact Development (LID) techniques in order to support natural systems that provide wildlife with food, shelter, and clean water.

All of the provisions of Section 60.12 are voluntary and are not required of new development or redevelopment. The provisions are applicable only when a property owner elects to utilize the provisions contained in this section.

The provisions of this section are intended to:

1. Promote preservation, enhancement and restoration of Habitat Benefit Areas (HBAs).
2. Reduce impacts from development on fish and wildlife habitat relative to traditional development practices.
3. Design a site in such a way that Habitat Friendly Development Practices (HFDPs) are integrated in the overall plan.
4. Use Best Management Practices (BMPs) to guide decisions regarding site design, development and construction.
5. Reduce Effective Impervious Area (EIA) in the City to the extent practicable and achieve zero (0) percent EIA on as many individual sites as practicable.
6. Avoid damaging existing wildlife habitat through preservation of HBA, minimize impacts to existing wildlife habitat by limiting the amount of habitat disturbance to only those areas required for development of a site, and mitigate impacts to existing wildlife habitat when avoidance and minimization options are limited. Use LID techniques to mitigate impacts in order to improve remaining on-site habitat and/or down-stream habitat.
7. Encourage HFDPs by adopting options that allow for flexibility in site design for new development and redevelopment.
8. Implement provisions of the Beaverton Comprehensive Plan that encourage preservation of HBA and use of LID techniques.

60.12.10. Process. Implementation of a HFDP shall not result in a requirement for a separate Development Code, Chapter 40, application. The level of review for a Chapter 40 application shall not be elevated or lessened based on proposed implementation of a HFDP.

60.12.15. Engineered Techniques. In some instances, proposed implementation of a HFDP will require an Engineering Design Manual Design Modification approved by the City Engineer. The Design Modification process is outlined in Section 145 of the *Engineering Design Manual and Standard Drawings* (EDM). An applicant may choose to receive approval from the City Engineer prior to, or concurrent with, review of a land use application.

In order for the decision making body to approve a requested credit for proposed implementation of a technique that requires a review of the technique's technical feasibility, engineered drawings and calculations need to be completed and submitted with the land use application for development review.

60.12.20. Guidance. *The City of Beaverton Habitat Friendly Development Practices Guidance Manual* provides an expanded description of principles and techniques that may be integrated into site design to meet the goals and objectives within Section 60.12.05.

60.12.25. Credits. As used in this Code section, the term credits refers to development credits an applicant may earn through HBA preservation or use of LID techniques which are described in Sections 60.12.35. through 60.12.40., below. The mix of credits requested is left to the applicant's discretion for a single project site, as credits are not transferable between separate project sites.

60.12.30. Standards. The following standards shall be satisfied by new development and redevelopment, throughout the City when a request for use of a credit(s) allowed through Section 60.12.35 or Section 60.12.40 is proposed.

1. The proposal satisfies all applicable standards for the preservation, technique, or credit requested.

60.12.30.

2. The proposal is consistent with all applicable provisions of Chapter 20 (Land Uses) unless the applicable provisions are subject to a credit for implementation of a proposed HFDP.
3. The proposal is consistent with all applicable provisions of Section 60.12 (Habitat Friendly Development Practices) and all improvements, dedications, or both required by the applicable provisions of Section 60.12 (Habitat Friendly Development Practices) are satisfied or can be provided in proportion to the identified impact(s) of the proposal.
4. Implementation of the proposed Habitat Friendly Development Practice(s) is technically feasible in accordance with Section 60.12.15. Engineered Techniques.
5. The size of the improvement proposed to implement the Habitat Friendly Development Practice(s) is greater than or equal to the amount required to receive the requested credit(s).
6. The proposed credit is a credit that is allowed for the proposed Habitat Friendly Development Practice(s).
7. Use of credits is limited to the amount of preservation or technique proposed. One (1) unit of preservation or technique results in one credit. Awarding a credit or a combination of credits shall not result in receipt of multiple credits for one (1) unit of preservation or technique.
8. Where a credit(s) toward the landscape standard, parking lot landscape island standard, or open space standard is requested, the proposed project requesting credits toward the landscape standard, parking lot landscape island standard, or open space standard does not cumulatively receive credits greater than 50 percent of the landscape or open space standard for the project site, with the exception of credit for installation of a Rain Garden. .
9. Where a credit(s) toward the landscape standard, parking lot landscape island standard, or open space standard is requested for installation of a Rain Garden, the proposed project requesting credits toward the landscape standard, parking lot landscape island standard, or open space standard does not cumulatively receive credits greater than 75 percent of the landscape or open space standard for the project site.

60.12.30.

10. Where a credit(s) to increase the building height above the maximum for the underlying zoning district is requested, the proposed project does not cumulatively receive credits greater than 12 feet additional building height, with the exception of Section 60.12.40.4.B.1 Building Height Increase, Multiple-Use Zoning Districts (Eco-roof).
11. Where a credit(s) to increase the building height above the maximum is requested for a project within a Multiple-Use zoning district, the proposed project does not cumulatively receive credits greater than 12 feet, 24 feet, or 36 feet additional building height, respective of Sections 60.12.40.4.B.1.a, 60.12.40.4.B.1.b, and 60.12.40.4.B.1.c.

60.12.35. Habitat Benefit Area (HBA) Preservation. Locations of HBAs are depicted on the *Comprehensive Plan Volume III Habitat Benefit Area Map*. Habitat resource classification and delineation methodologies are included in the *Comprehensive Plan for the City for Beaverton Volume III: Statewide Planning Goal 5 Resource Inventory Documents*.

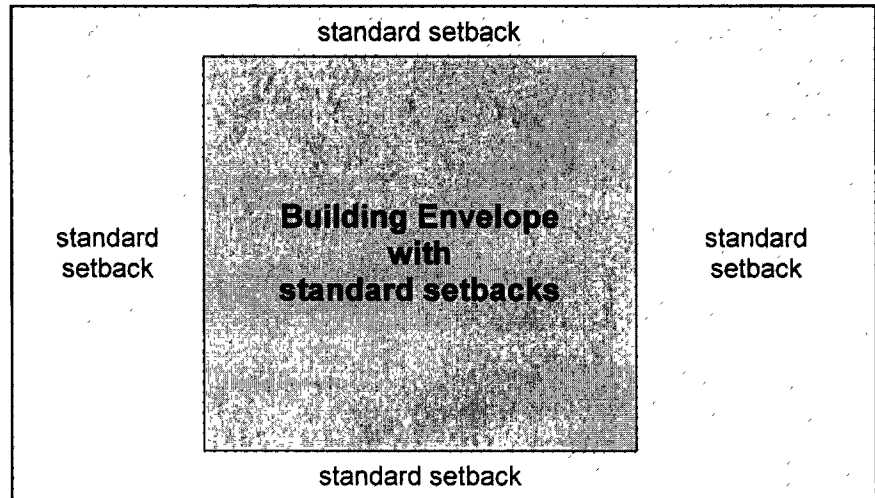
1. Preservation, Enhancement, Mitigation, Creation.

- A. Purpose. HBA Preservation includes preservation, enhancement, mitigation, or creation of HBA based upon habitat delineation.
- B. Credits. Use of the following credits is limited to the amount of HBA preservation proposed. One (1) square foot of HBA preserved results in one credit. Awarding a credit or a combination of credits shall not result in receipt of multiple credits for one (1) square foot of HBA preservation.
 1. Building Envelope Offset in Commercial and Industrial Zoning Districts. An applicant can request a yard setback decrease of one (1) foot for every one (1) lineal foot that a proposed HBA preservation encroaches into a project site from the opposite side; in exchange the opposite yard setback shall be increased one (1) lineal foot.

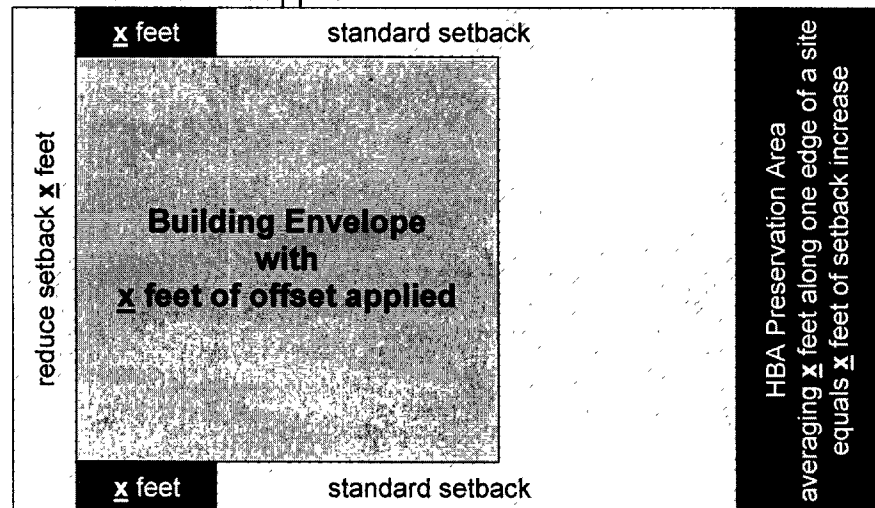
60.12.35.1.B.1.

Building Envelope Offset Example.

Standard Setbacks.



Setback Offset applied.



Standards. Building Envelope Offset credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

- a. Credit Limit. The proposed Building Footprint Offset does not reduce a yard setback to less than five (5) feet.

60.12.35.1.B.1.

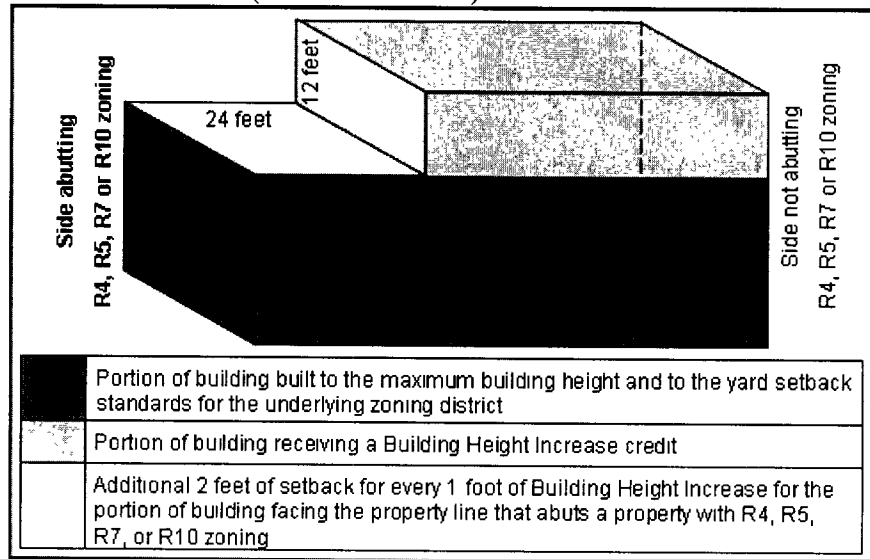
- b. The requested setback reduction is not requested for any property within the R4, R5, R7, R10 or RA zoning districts.
 - c. A requested setback reduction does not abut any property within the R4, R5, R7, R10 or RA zoning districts.
 - d. The proposed reduction will meet applicable fire or life safety requirements.
 - e. The proposed reduction will meet applicable building code requirements.
2. Building Height Increase. A proposal that includes HBA preservation can request an increase in building height up to 12 feet within the building footprint. The square footage of the building footprint receiving the building height increase shall be equal to or less than the square footage of HBA preservation, not to exceed the square footage of the building footprint. This credit is applicable in all zones except R4, R5, R7, and R10.

Standards. Building Height Increase credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

- a. Credit Limit. The proposed Building Height Increase does not exceed 12 additional feet for an area equal to the building footprint.
- b. When abutting an R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, the portion of the building(s) receiving the height increase shall be designed with an additional setback from the R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, of two (2) feet for every one (1) foot of building height increase.

60.12.35.1.B.2.b.

Building Height Increase Example with additional setback. (elevation view)



- c. The building receiving the height increase shall be located within the project site where the HBA is preserved.
 - d. The building receiving the height increase shall not increase the height within 50 feet of the Downtown Historic District or a Historic Landmark.
3. Floor Area Reduction in Multiple-Use Zoning Districts. For every one (1) square foot proposed HBA preservation on a project site, an applicant can request a credit of one (1) square foot toward satisfying the minimum floor area requirement for a project site.

Standards. Floor Area Reduction credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

- a. **Credit Limit.** The proposed Floor Area Reduction does not exceed 25 percent of the required floor area for the project site.

60.12.35.1.B.

4. **Landscape Island Standard Reduction.** For every one (1) square foot proposed HBA preservation, within ten (10) feet of a proposed parking lot area, an applicant can request a credit of one (1) square foot toward the landscape island standard of Section 60.05.20.5.

Standards. Landscape Island Standard Reduction credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

- a. **Credit Limit.** The proposed Landscape Island Standard Reduction does not exceed 50 percent of the landscape island standard for the project based upon the minimum number of parking spaces required for the subject site divided by the applicable standard of Section 60.05.20.5.A.

5. **Landscape Standard Reduction.** For every one (1) square foot of HBA preservation proposed, an applicant can request a credit of one (1) square foot toward the landscape standard.

Standards. Landscape Standard Reduction credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

- a. **Credit Limit.** The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.

6. **Lot Dimension Reduction.** An applicant can request a credit toward reduction of either the standard minimum lot dimension for width or the standard minimum lot dimension for depth, while continuing to meet the minimum lot size and minimum density requirements of the underlying zoning district.

60.12.35.1.B.6.

Standards. Lot Dimension Reduction credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

- a. Credit Limit. The proposed Lot Dimension Reduction does not exceed 20 percent of the required width or 20 percent of the required depth of the underlying zoning district's lot dimension requirement.
 - b. HBA preservation is equal to or greater than the minimum lot area square footage for one (1) lot within the underlying zoning district. If an applicant chooses to use both Lot Size Averaging (60.12.35.1.B.7.) and Lot Dimension Reduction for one project site, the applicant may propose one technique or the other for each lot, but may not apply both techniques to any one (1) lot.
 - c. HBA preservation is equal to or greater than the minimum lot area square footage for two (2) lots within the underlying zoning district. If an applicant chooses to use both Lot Size Averaging (60.12.35.1.B.7.) and Lot Dimension Reduction for one project site, the applicant may propose application of both techniques to all proposed lots.
7. Lot Size Averaging. An applicant can request a credit toward averaging the size of proposed lots rather than meeting the minimum lot size requirement for every proposed lot, while continuing to meet minimum density requirements of the underlying zoning district.

Standards. Lot Size Averaging credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

60.12.35.1.B.7.

- a. Credit Limit. The proposed Lot Size Averaging does not reduce the square footage of any one lot below 80 percent of the minimum and does not increase the square footage of any one lot above 120 percent of the maximum square footage of the underlying zoning district's lot area standard.
 - b. HBA preservation is equal to or greater than the minimum lot area square footage for one (1) lot within the underlying zoning district. If an applicant chooses to use both Lot Size Averaging and Lot Dimension Reduction (60.12.35.1.B.6.) for one project site, the applicant may propose one technique or the other for each lot, but may not apply both techniques to any one (1) lot.
 - c. HBA preservation is equal to or greater than the minimum lot area square footage for two (2) lots within the underlying zoning district. If an applicant chooses to use both Lot Size Averaging and Lot Dimension Reduction (60.12.35.1.B.6.) for one project site, the applicant may propose application of both techniques to all proposed lots.
8. Open Space Standard Reduction. For every one (1) square foot HBA preservation proposed, an applicant can request a credit of one (1) square foot toward the open space standard.

Standards. Open Space Standard Reduction credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.35.C.

- a. Credit Limit. The proposed Open Space Standard Reduction does not exceed 50 percent of the open space standard of Section 60.05.25.1, Section 60.05.25.2, Section 60.05.25.4 and Section 60.35.15 for the project site.

60.12.35.1.

- C. Standards. Proposals that request credits for HBA preservation shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Sections 60.12.35.B.1 through 60.12.35.B.8.
1. The area of HBA Preservation, Enhancement, Mitigation or Creation shall be placed within a conservation easement or a separate tract as described in Section 60.12.50. As a condition of approval, a covenant with the City shall be established as described in Section 60.12.50.
 2. If the area of HBA Preservation, Enhancement, Mitigation or Creation overlaps with an area in which development is currently restricted by regulations of the City or another government agency, the area of overlap shall not be eligible to receive credits under this section.
 3. When in conjunction with a Tree Plan application, if the area of HBA Preservation, Enhancement, Mitigation or Creation overlaps with a Preservation Area containing Protected Trees or Community Trees, as described in Section 60.60.15.2 of this Code, the area of overlap that exceeds the minimum tree preservation requirements of a Tree Plan 2 application shall be eligible to receive credits under this section.
 4. Proposals for HBA Mitigation shall:
 - a. replace existing HBA that is proposed for removal on the same project site.
 - b. be contiguous with an existing HBA or designated Clean Water Services Vegetated Corridor for a minimum of 50 feet.
 - c. be equal to or greater than existing HBA proposed for removal.
 5. Proposals for HBA Creation shall:
 - a. be developed with natural landscaping that supports native wildlife.

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60.12.35.1.C.5.

- b. be contiguous with an existing HBA or CWS vegetated corridor for a minimum of 50 feet.
- c. be a minimum of 2,500 square feet.

60.12.35. HABITAT BENEFIT AREA (HBA) PRESERVATION - CREDIT TABLE			
A. Purpose	HBA Preservation, Enhancement, Mitigation or Creation	Propose	One (1) square foot (Bldg Envelope Offset - one (1) lineal foot)
B. Credits		Toward	Amount Limit
1. Building Envelope Offset		setback	1 lineal ft offsetting
2. Building Height Increase		bldg ht	1 sf 12 ft
3. Floor Area Reduction (MU)		min. floor area	1 sf 25% required floor area
4. Landscape Island Standard Reduction		landscape island	1 sf 50% landscape island std
5. Landscape Standard Reduction		landscape	1 sf 50% landscape std
6. Lot Dimension Reduction		lot dimension	20% width/depth HBA sf = min 1 du
7. Lot Size Averaging		lot area per du	80% to 120% HBA sf = min 1 du
8. Open Space Standard Reduction		open space	1 sf 50% open space std
bldg = building, du = dwelling unit, ft = foot/feet, ht = height, sf = square feet, std = standard, min = minimum, max = maximum			

60.12.40. Low Impact Development (LID) Techniques. Use of LID techniques is allowed throughout the City unless otherwise stated.

1. Additional Street Tree Canopy.

- A. Purpose. Increase street tree canopy by increasing the number of street trees for a project equal to an amount greater than the standard of one (1) tree per 30 lineal feet, but not to exceed one (1) tree per 20 lineal feet.
- B. Credits. Landscape Standard Reduction. For every one (1) square foot of additional street tree canopy proposed an applicant can request a credit of one (1) square foot toward the landscape standard.
- C. Standards. Landscape Standard Reduction credits for Additional Street Tree Canopy shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.
 - 1. Credit Limit. The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.

60.12.40.1.C.

2. The additional Street Tree canopy is calculated based on the square footage of additional street tree canopy at 10 years maturity.
3. The additional street tree canopy is calculated only for those trees in excess of the standard of one (1) tree per 30 lineal feet.
4. The additional street tree is an accepted street tree as specified in the City of Beaverton's *Approved Tree List* and *Street of Trees Tour Guide*.

2. Site Soil Amendment.

- A. Purpose. Site Soil Amendment within proposed landscape areas for projects located in multiple-use, multiple-family residential, commercial, and industrial zoning districts.
- B. Credits. Use of the following credits is limited to the amount Site Soil Amendment proposed. One (1) square foot of Site Soil Amendment results in one credit. Awarding a credit or a combination of credits shall not result in receipt of multiple credits for one (1) square foot of Site Soil Amendment.
 1. Landscape Standard Reduction. For every one (1) square foot of Site Soil Amendment proposed an applicant can request a credit of one and one-half (1.5) square feet toward the landscape standard.

Standards. Landscape Standard Reduction credits for Site Soil Amendment shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.

- a. Credit Limit. The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.

60.12.40.2.B.

2. **Landscape Island Standard Reduction.** For every one (1) square foot of Site Soil Amendment proposed an applicant can request a credit of one and one-half (1.5) square feet toward the landscape island standard limited to 50 percent of the landscape island standard for the project site.

Standards. A request for Landscape Island Standard Reduction credits for Site Soil Amendment shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.

- a. **Credit Limit.** The proposed Landscape Island Standard Reduction does not exceed 50 percent of the landscape island standard for the project based upon the minimum number of parking spaces required for the subject site divided by applicable standard of Section 60.05.20.5.A.

3. Disconnect Downspouts.

- A. **Purpose.** Disconnect a downspout directing the roof stormwater to a rain garden for projects located in multiple-use, multiple-family residential, commercial, and industrial zoning districts.
- B. **Credits. Landscape Standard Reduction.** Projects that disconnect downspouts from directly entering the piped municipal storm water system can count each square foot of roof area drained toward one-quarter (0.25) square feet of the landscape standard for the subject site. This credit is in addition to credits received for the rain garden, Section 60.12.40.B.5, that the roof stormwater is directed to flow into.
- C. **Standards. Landscape Standard Reduction credits for Disconnecting a Downspout(s)** shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.
 1. **Credit Limit.** The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.

60.12.40.3.

- D. Disconnection of downspouts will also be reviewed with a Building Permit.

4. Eco-roof.

- A. Purpose. Install an Eco-roof equal to at least 10 percent of the building footprint for projects located in multiple-use, multiple-family residential, commercial, and industrial zoning districts.
- B. Credits. Use of the following credits is limited to the amount Eco-roof proposed. One (1) square foot of Eco-roof results in one credit. Awarding a credit or a combination of credits shall not result in receipt of multiple credits for one (1) square foot of Eco-roof.

- 1. Building Height Increase, Multiple-Use Zoning Districts.

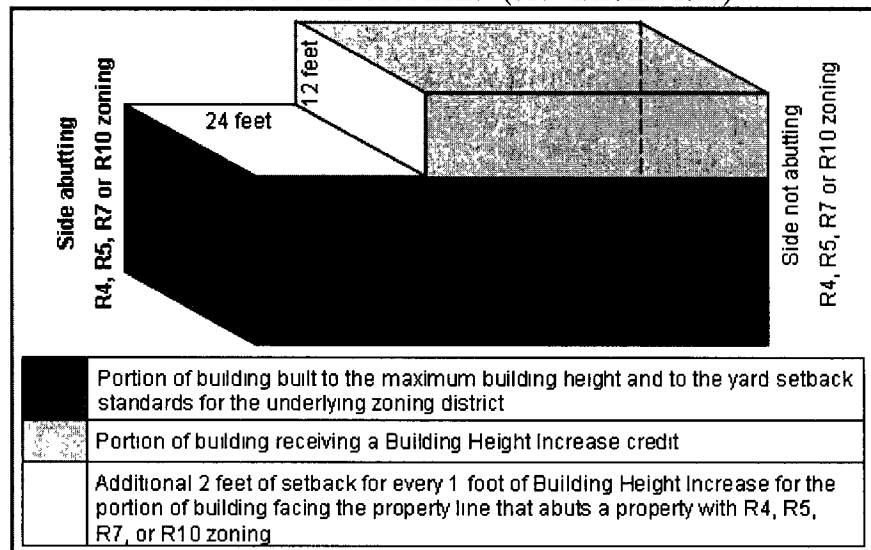
- a. For a proposal that includes an Eco-roof that is at least 10 percent but less than 30 percent of the building's footprint, an applicant can request an increase in building height up to 12 feet within the building footprint. The square footage of the building footprint receiving the building height increase shall be equal to or less than the square footage of Eco-roof.
- b. For a proposal that includes an Eco-roof that is at least 30 percent but less than 60 percent of the building's footprint, an applicant can request an increase in building height up to 24 feet within the building footprint. The square footage of the building footprint receiving the building height increase shall be equal to or less than two (2) times the square footage of Eco-roof.
- c. For a proposal that includes an Eco-roof that is at least 60 percent of the building's footprint, an applicant can request an increase in building height up to 36 feet within the building footprint.

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60.12.40.4.B.1.

- d. **Standards.** Building Height Increase credits for installation of an Eco-roof in a Multiple-Use zoning District shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.4.C.
- (1). **Credit Limit.** The proposed Building Height Increase does not exceed the relative 12, 24, or 36 foot standard outlined in a, b, or c, above.
 - (2). The square footage of the building footprint receiving the building height increase shall be equal to or less than three (3) times the square footage of Eco-roof.
 - (3). When abutting an R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, the portion of the building(s) receiving the height increase shall be designed with an additional setback from the R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, of two (2) feet for every one (1) foot of building height increase.

Building Height Increase Example with
additional setback. (elevation view)

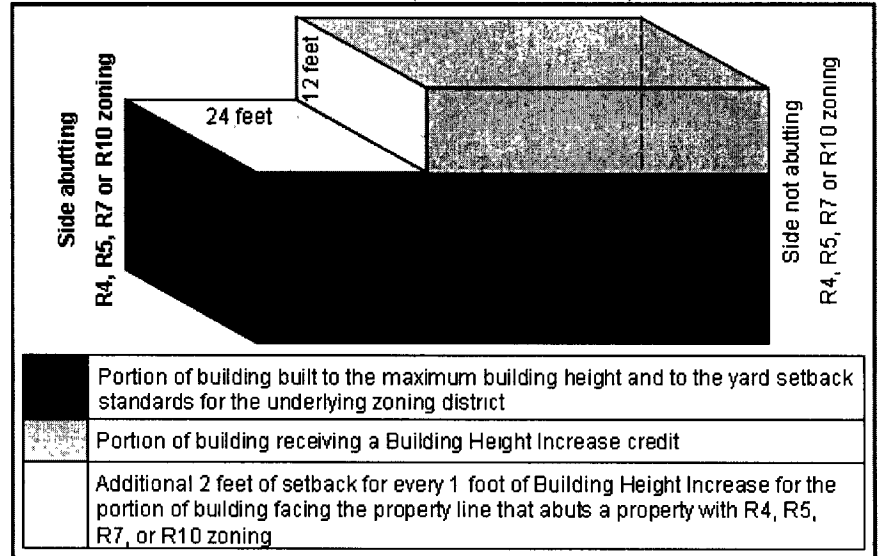


60.12.40.4.B.1.d.

- (4). The building receiving the height increase shall be the building with the Eco-roof.
 - (5). The building receiving the height increase shall not increase the height within 50 feet of the Downtown Historic District or a Historic Landmark.
2. Building Height Increase, Multiple-Family, Commercial and Industrial Zoning Districts.
 - a. For every one (1) square foot of Eco-roof proposed an applicant can request a credit of one (1) square foot toward an increase in building height up to 12 feet within the building footprint.
 - b. Standards. Building Height Increase credits for installation of an Eco-roof in a Multiple-Family, Commercial or Industrial Zoning Districts shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.4.C.
 - (1). Credit Limit. The proposed Building Height Increase does not exceed 12 additional feet for an area equal to the building footprint.
 - (2). The square footage of the building footprint receiving the building height increase shall be equal to or less than the square footage of Eco-roof.
 - (3). When abutting an R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, the portion of the building(s) receiving the height increase shall be designed with an additional setback from the R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, of two (2) feet for every one (1) foot of building height increase.

60.12.40.4.B.2.b.

Building Height Increase Example with
additional setback. (elevation view)



- (3). The building receiving the height increase shall be the building with the Eco-roof.
 - (4). The building receiving the height increase shall not increase the height within 50 feet of the Downtown Historic District or a Historic Landmark.
3. Landscape Standard Reduction. For a proposal that includes an Eco-roof, every one (1) square foot of Eco-roof earns one (1) square foot toward the landscape standard for the subject site.

Standards. Landscape Standard Reduction credits for installation of an Eco-roof shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.4.C.

- a. Credit Limit. The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.

60.12.40.5.

5. Rain Garden.

- A. Purpose. Integration of a facility that provides a bio-detention function, bio-retention function, or other vegetated on-site stormwater disposal function within a project site that is located in a multiple-use, multiple-family residential, commercial, or industrial zoning district.
- B. Credits. Use of the following credits is limited to the amount of stormwater that can be retained or detained by the Rain Garden proposed. One (1) cubic foot of stormwater retention or detention results in one credit. Awarding a credit or a combination of credits shall not result in receipt of multiple credits for one (1) cubic foot of stormwater retained or detained by the Rain Garden.
 - 1. Building Height Increase. A proposal for integration of a Rain Garden can request an increase in building height up to 12 feet within the building footprint. The square footage of the building footprint receiving the building height increase shall be equal to or less three (3) square feet for every one (1) cubic foot of water retained or detained by the Rain Garden, not to exceed the square footage of the building footprint.

Standards. Building Height Increase credits for installation of a Rain Garden shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.5.C.

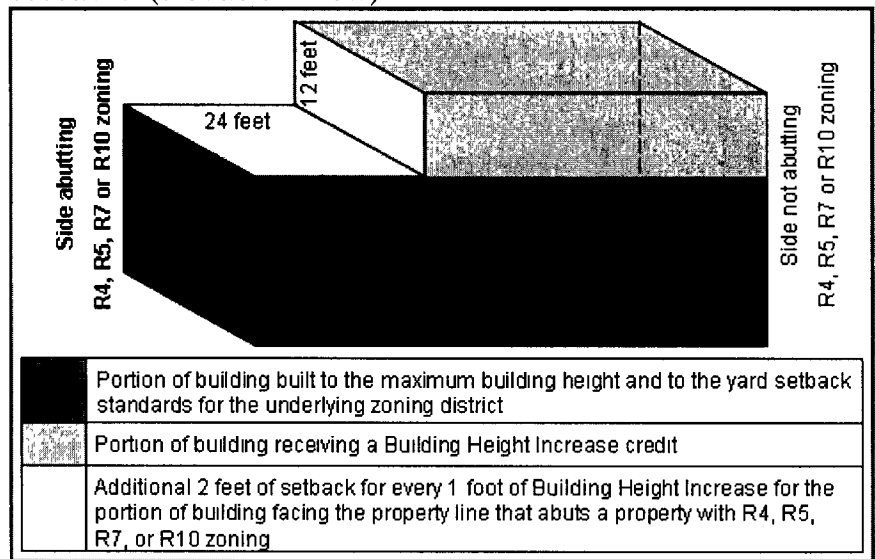
- a. Credit Limit. The proposed Building Height Increase does not exceed 12 feet of height above the standard for the underlying zoning district.

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60.12.40.5.B.1.

- b. When abutting an R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, the portion of the building(s) receiving the height increase shall be designed with an additional setback from the R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, of two (2) feet for every one (1) foot of building height increase.

Building Height Increase Example with additional setback. (elevation view)



- c. The building receiving the height increase shall be located within the project site where the Rain Garden is proposed.
- d. The building receiving the height increase shall not increase the height within 50 feet of the Downtown Historic District or a Historic Landmark.
2. Landscape Island Standard Reduction. For every one (1) cubic foot of water retained or detained in the design of a proposed Rain Garden that is located within the design of the parking lot(s) for a project site, an applicant can request a credit of one and one-half (1.5) square feet toward the landscape island standard.

60.12.40.5.B.2.

Standards. Landscape Island Standard Reduction credits for installation of a Rain Garden shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.5.C.

- a. Credit Limit. The proposed Landscape Island Standard Reduction does not exceed 75 percent of the landscape island standard for the project site.
3. Landscape Standard Reduction. For every one (1) cubic foot of water retained or detained in the design of a proposed Rain Garden, an applicant can request a credit of three (3) square feet toward the landscape standard.

Standards. Landscape Standard Reduction credits for installation of a Rain Garden shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.5.C.

- a. Credit Limit. The proposed Landscape Standard Reduction does not exceed 75 percent of the landscape standard for the project site.
- C. Standards. Proposals that request credits for integration of a Rain Garden(s) shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Sections 60.12.40.5.B.1. through 60.12.40.5.B.3.
 1. The rain garden shall be designed to capture thirty-six hundredths (0.36) of an inch of rainfall in a four (4) hour period, minimum. The maximum bonus given shall be for a design that captures three (3) inches of rainfall in a 24 hour period (approximately a five-year storm) equivalent volume, even if part of a larger storm detention facility intended to meet the City's 25-year storm event requirement.
 2. The rain garden shall be located on the site or abut the site in a right-of-way so that it is visible to the public from sidewalks that provide access to the project.

60.12.40.5.C.

3. Any retaining walls proposed around the Rain Garden shall be less than or equal to 30 inches in height.
4. Landscape planting plans for the rain garden shall be prepared with consideration to sun and shade conditions.
5. There shall be no vertical obstruction with northern exposure of greater than four (4) feet directly adjacent to the rain garden. The minimum distance from such a north facing vertical obstruction to the rain garden shall be half the height of the vertical obstruction.
6. The design and location of the rain garden shall be approved as part of the overall project during development review.
8. If not within a public right-of-way, the property owner shall set aside the rain garden in a conservation easement or a separate tract. The conservation easement or tract shall comply with the requirements of Section 60.12.55.2.

6. Rooftop Garden.

- A. Purpose. Integration of a Rooftop Garden in the design of a building(s) located in a multiple-use, multiple-family residential, commercial, or industrial zoning districts.
- B. Credits. Use of the following credits is limited to the amount Rooftop Garden proposed. One (1) square foot of Rooftop Garden results in one credit. Awarding a credit or a combination of credits shall not result in receipt of multiple credits for one (1) square foot of Rooftop Garden.
 1. Building Height Increase. A proposal that integrates a Rooftop Garden can request an increase in building height up to 12 feet within the building footprint. The square footage of the building footprint receiving the building height increase shall be equal to or less than one-half (0.5) square foot for every one (1) square foot of Rooftop Garden proposed, not to exceed the square footage of the building footprint.

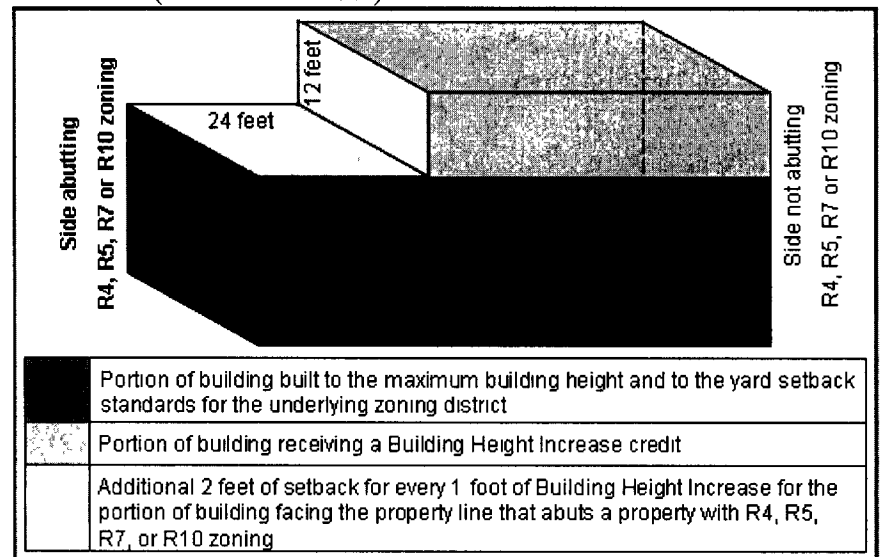
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60.12.40.6.B.1.

Standards. Building Height Increase credits for integration of a Rooftop Garden shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.6.C.

- a. **Credit Limit.** The proposed Building Height Increase does not exceed 12 feet of height above the standard for the underlying zoning district
- b. When abutting an R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, the portion of the building(s) receiving the height increase shall be designed with an additional setback from the R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, of two (2) feet for every one (1) foot of building height increase.

Building Height Increase Example with additional setback. (elevation view)



- c. The building receiving the height increase shall be the building with the Rooftop Garden.
- d. The building receiving the height increase shall not increase the height within 50 feet of the Downtown Historic District or a Historic Landmark.

60.12.40.6.B.

2. Landscape Standard Reduction. For every one (1) square foot of Rooftop Garden constructed an applicant can request a credit toward one and one-half (1.5) square feet of the landscape standard for the project site.

Standards. Landscape Standard Reduction credits for integration of a Rooftop Garden shall satisfy the following standards in addition to the applicable standards of Section 60.12.30 and Section 60.12.40.6.C.

- a. Credit Limit. The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape island standard for the project site.
- C. Standard. A Rooftop Garden shall be equivalent to at least 25 percent of the building footprint and at least 30 percent of the garden area shall contain live plants. In addition, a proposal for a Rooftop Garden shall satisfy the applicable standards of Section 60.12.30.

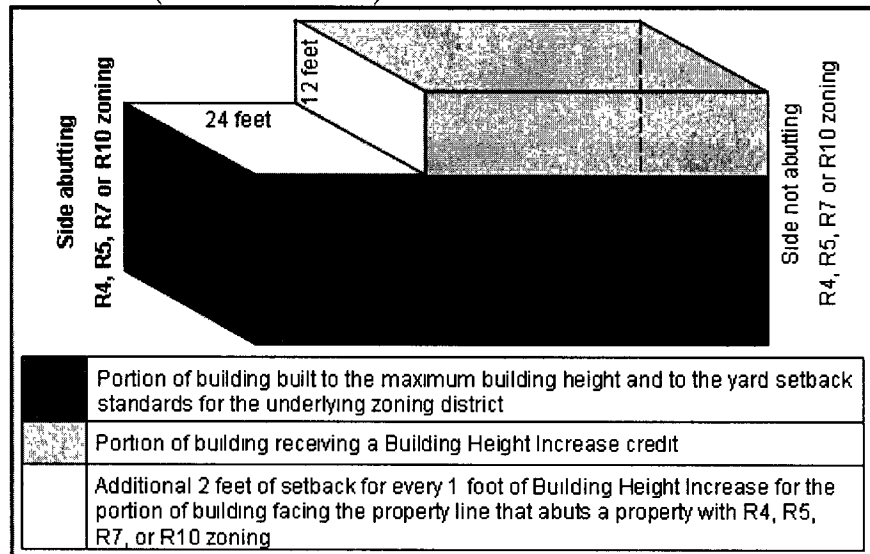
7. Integrated Parking.

- A. Purpose. Integration of below-grade, tuck-under, or structured parking within the footprint of a building(s) located in a multiple-use, multiple-family residential, commercial, or industrial zoning district or structured parking located in a multiple-use zoning district.
- B. Credit. Building Height Increase. A proposal that includes Integrated Parking can request an increase in building height up to 12 feet within the building footprint. The square footage of the building footprint receiving the building height increase shall be equal to or less than two (2) square feet for every 100 square feet of integrated parking proposed, not to exceed the square footage of the building footprint.
- C. Standards. Building Height Increase credits for Integrated Parking shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.

60.12.40.7.C.

1. Credit Limit. The proposed Building Height Increase does not exceed 12 feet of height above the standard for the underlying zoning district.
2. For every structured parking space provided there shall be a reduction of at least one surface parking space that otherwise could have been provided within the maximum parking ratio requirements of Section 60.30.
3. When abutting an R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, the portion of the building(s) receiving the height increase shall be designed with an additional setback from the R4, R5, R7, R10 or RA zoning district, or equivalent County zoning district, of two (2) feet for every one (1) foot of building height increase.

Building Height Increase Example with additional setback. (elevation view)



4. The building receiving the height increase shall be the building with the Integrated Parking.
5. The building receiving the height increase shall not increase the height within 50 feet of the Downtown Historic District or a Historic Landmark.

60.12.40.

8. Trees, Existing Canopy Preservation.

- A. Purpose. Preservation of existing tree canopy within ten (10) linear feet of a proposed surface parking lot and vehicle maneuvering area.
- B. Credit. Landscape Island Standard Reduction. For every one (1) square foot of existing Tree Canopy preserved, an applicant can request a credit of one (1) square foot toward the landscape island standard of Section 60.05.20.5.

EXAMPLE: If an applicant proposes development of a site and the size of the proposed parking lot results in standard construction of five (5) landscape islands equal to an area of 350 square feet and planting of five (5) trees, the applicant can alternately propose preservation of three mature trees within a 200 square foot area and supply two (2) or three (3) landscape islands totaling 175 square feet landscape area with two (2) trees.

- C. Standards. Landscape Island Standard Reduction credits for Existing Canopy Preservation of Trees shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.
 - 1. Credit Limit. The proposed Landscape Island Standard Reduction does not exceed 50 percent of the landscape island standard for the project site.
 - 2. The proposal satisfies the approval criteria of the applicable Tree Plan application, if any.
 - 3. The tree(s) that holds the canopy proposed for preservation is proposed for protection as outlined in Section 60.60.20. of this Code for Protected Trees.

9. Trees, Mitigation.

- A. Purpose. Mitigation for removal of non-exempt surveyed tree(s) considered Community Trees, Historic Trees or Street Trees.

60.12.40.9.

- B. Credits. Landscape Standard Reduction. For every one (1) square foot of tree canopy mitigated, an applicant can request a credit toward one-half (0.5) square foot of the landscape standard for the project site.
- C. Standards. Landscape Standard Reductions for Mitigation of Trees shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.
 - 1. Credit Limit. The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.
 - 1. The proposal satisfies the approval criteria of the applicable Tree Plan application, if any.
 - 2. Mitigation of Community Trees, Historic Trees or Street Trees under the provisions of this section satisfies the mitigation standards of Section 60.60.25.1 for Significant Individual Trees or trees within Significant Groves or SNRAs.

10. Trees, Preservation.

- A. Purpose. Preservation of at least 25 percent of the total tree canopy square footage of non-exempt surveyed tree(s) considered Community Trees, Historic Trees or Street Trees.
- B. Credit. Landscape Standard Reduction. For every one (1) square foot of tree canopy preserved, an applicant can request a credit toward one (1) square foot of the landscape standard for the project site, limited to 50 percent of the landscape standard for the project site.
- C. Standards. Landscape Standard Reduction credits for Preservation of Trees shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.
 - 1. Credit Limit. The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.

60.12.40.10.C.

2. The proposal satisfies the approval criteria of the applicable Tree Plan application, if any.
3. The Community, Historic or Street tree(s) proposed for preservation under the provisions of this section is proposed for protection during development as outlined by Section 60.60.20. of this Code for Protected Trees.

11. Trees, Box Filter.

- A. Purpose. Integration of a Tree Box Filter(s) and its associated improvements in the design of a project site.
- B. Credits. Landscape Standard Reduction. For every one (1) square foot of proposed site improvements associated with installation of a Tree Box Filter an applicant can request a credit of two (2) square feet toward the landscape standard.
- C. Standards. Landscape Standard Reduction credits for integration of a Tree Box Filter(s) shall satisfy the following standards in addition to the applicable standards of Section 60.12.30.
 1. Credit Limit. The proposed Landscape Standard Reduction does not exceed 50 percent of the landscape standard for the project site.

60.12.40. LOW IMPACT DEVELOPMENT (LID) TECHNIQUES - CREDIT TABLE			
1. Additional Street Tree Canopy			
A. Purpose	Add tree canopy by adding street trees above standard	Propose 1sf additional street tree canopy	
B. Credits		Toward	Amount
	Landscape Standard Reduction	landscape	1 sf
			Limit
			50% landscape std
2. Site Soil Amendment			
A. Purpose	Amend soils for additional water absorption	Propose 1sf amended site soils	
B. Credits		Toward	Amount
	1. Landscape Standard Reduction	landscape	1 sf
			Limit
			50% landscape std
	2. Landscape Island Standard Reduction	landscape island	1 sf
			Limit
			50% landscape island std
3. Disconnect Downspouts			
A. Purpose	Direct roof stormwater runoff to a Rain Garden	Propose 1sf of roof area drained	
B. Credits		Toward	Amount
	1. Landscape Standard Reduction	landscape	0.25 sf
			Limit
			50% landscape std

bdg = building, du = dwelling unit, ft = foot/feet, ht = height, sf = square feet, std = standard, min = minimum, max = maximum

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Habitat Friendly Development

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60.12.40. LOW IMPACT DEVELOPMENT (LID) TECHNIQUES - CREDIT TABLE			
4. Eco-roof			
A Purpose	Eco-roof to absorb roof stormwater	Propose 1sf of eco-roof	
B. Credits		Toward	Amount Limit
1. Building Height Increase, Multiple-Use zoning districts			
a. 10% to < 30% of building footprint	bldg footprint	1 sf	12 ft above bldg ht
b. 30% to < 60% of building footprint	bldg footprint	2 sf	24 ft above bldg ht
c. 60% or more of building footprint	bldg footprint	3 sf	36 ft above bldg ht
2. Building Height Increase, Multiple-Family, Commercial, and Industrial zoning districts			
	bldg footprint	1 sf	12 ft above bldg ht
3. Landscape Standard Reduction	landscape	1 sf	50% landscape std
5. Rain Garden			
A Purpose	Bio-detention, bio-retention, or other vegetated facility	Propose 1cu ft of water detained/retained	
B. Credits		Toward	Amount Limit
1. Building Height Increase	bldg footprint	3 sf	12 ft above bldg ht
2. Landscape Island Standard Reduction	landscape island	1.5 sf	75% landscape island std
3. Landscape Standard Reduction	landscape	3 sf	75% landscape std
6. Rooftop Garden			
A Purpose	Rooftop improvements to absorb roof stormwater	Propose 1sf of rooftop garden	
B. Credits		Toward	Amount Limit
1. Building Height Increase	bldg footprint	0.5 sf	12 ft above bldg ht
2. Landscape Standard Reduction	landscape	1.5 sf	50% landscape std
7. Integrated parking			
A Purpose	Below-grade, tuck-under, or structured parking	Propose 100 sf of integrated parking	
B. Credits		Toward	Amount Limit
1. Building Height Increase	bldg footprint	2 sf	12 ft above bldg ht
8. Trees, Existing Canopy Preservation			
A Purpose	Preserve tree canopy within 10 ft of parking & maneuvering	Propose 1sf tree canopy preserved	
B. Credits		Toward	Amount Limit
1. Landscape Island Standard Reduction	landscape island	1 sf	50% landscape island std
9. Trees, Mitigation			
A Purpose	Mitigate Community, Historic, or Street Tree removal	Propose 1sf tree canopy mitigated	
B. Credits		Toward	Amount Limit
1. Landscape Standard Reduction	landscape	0.5 sf	50% landscape std
10. Trees, Preservation			
A Purpose	Preserve Community, Historic, or Street Tree canopy	Propose 1sf tree canopy preserved	
B. Credits		Toward	Amount Limit
1. Landscape Standard Reduction	landscape	1 sf	50% landscape std
11. Trees, Box Filter			
A Purpose	Install Tree Box Filter	Propose 1sf tree box filter & improvements	
B. Credits		Toward	Amount Limit
1. Landscape Standard Reduction	landscape	2 sf	50% landscape std
bldg = building, du = dwelling unit, ft = foot/feet, ht = height, sf = square feet, std = standard, min = minimum, max = maximum			

60.12.45. Maintenance.

1. **Covenant with the City.** An applicant that requests enhancement, mitigation or creation of HBA or integration of LID techniques in association with the provisions of Section 60.12 shall execute a covenant with the City that ensures the preservation, installation, maintenance, and replacement, if necessary, of the HBA or LID improvements and that meets the requirements of Section 60.12.45.1.A., below. Covenants shall be liberally construed for maximum protection of health, safety, and welfare of life and property.
 - A. Content of the covenant. A covenant required by this Code or as a condition of land use approval shall provide that:
 1. The City's need to address a clear and present danger to life or property shall supersede limitations of a covenant;
 2. The owner will comply with all applicable Code requirements and conditions of approval;
 3. If the owner fails to perform under the covenant, the City may at any time seek any available legal or equitable remedy. However, there is a preference for negotiated resolution without the necessity of litigation;
 4. If, within one year of a citation filed by the City for violation under this section, the owner fails to carry out necessary repairs to on-site facilities, or to otherwise restore facilities to their intended functions, the city may terminate occupancy of the site and seek an injunction prohibiting future occupancy of the site while a violation of the covenant exists;
 5. Where the development rights of one site are dependent on the performance of conditions by the owner of another site, the covenants are judicially enforceable by the owner of one site against the owner of another;
 6. The applicant and property owner shall submit to the City of Beaverton a right of inspection allowing City staff or City contracted personnel to inspect the facility for proper function: and

60.12.45.1.A.

7. The city may condition permit or development approval upon provision of a surface and subsurface utility easement notwithstanding the beneficial effect of a covenant under this section.
- B. The covenant shall run with the land. The covenant shall be attached to the deed and be recorded in the appropriate records of Washington County. Proof of the recording shall be made prior to the issuance of any construction permits.
- C. Modifying the covenant.
 1. Modifications to a land use approval or a condition thereof shall be obtained through an amendment to the original land use decision subject to the provisions of Section 50.95 of this Code.
 2. Modifications that do not affect a land use approval or a condition thereof may be amended by written agreement by the parties without undergoing a land use application.
 3. The modified covenant shall run with the land. The modified covenant shall be attached to the deed and be recorded in the appropriate records of Washington County. Proof of the recording shall be made prior to the issuance of any building permits.

2. Preserved HBA

- A. Commercial, Industrial or Multiple-use zoning districts. When preserving HBA in a commercial, industrial or multiple-use zoning district, the property owner shall place the preserved HBA in a conservation easement and shall execute a covenant for preservation and maintenance of the HBA. The conservation easement and covenant documents shall be attached to the deed and be recorded in the appropriate records of Washington County.

60.12.45.

B. Residential zoning districts.

1. Single-family Residential zones. When preserving HBA in a single-family residential development that requires a Land Division application, the property owner shall place the preserved HBA in a separate tract. This tract may be retained by the property owner with the execution of a covenant or the tract may be dedicated to a public entity willing to receive the HBA.
2. Multi-family Residential zones. When preserving HBA in a multi-family residential development that does not require a Land Division application, the property owner shall place the preserved HBA in a conservation easement and shall execute a covenant for preservation and maintenance of the HBA. The conservation easement and covenant documents shall be attached to the deed and be recorded in the appropriate records of Washington County.
3. **Conditions of Approval.** A land use approval shall include conditions of approval that define the specific obligations for the site regarding preservation, installation, maintenance, and replacement of improvements related to preserved HBA or LID technique implementation or both.

CHAPTER 90 DEFINITIONS

EXISTING DEFINITIONS, REVISED.

Acreage, Net. [ORD 4046; May 1999] The net acreage for a site is defined as the proposal size expressed in acreage minus any unbuildable area. The following areas are deemed undevelopable for the purposes of calculating net acreage:

1. Street dedications and those areas used for private streets and common driveways; and
2. Environmentally constrained lands, such as open water areas, floodplains, water quality facilities, wetlands, natural resource areas, tree preservation areas, and Habitat Benefit Areas set aside in a conservation easement, separate tract, or dedicated to a public entity; and
3. Land set aside in separate tracts or dedicated to a public entity for schools, parks, or open space purposes.

NEW DEFINITIONS.

Site Soil Amendment. A soil amendment is any material added to a soil that improves its physical properties, such as water retention, permeability, water infiltration, drainage, aeration and structure. To do its work, an amendment must be thoroughly mixed into the soil. Amending a soil is not the same thing as mulching, although many mulches also are used as amendments, a mulch is left on the soil surface. The mix of amendments added to site soils varies depending on the composition of the site soils; please refer to the *Guidance Manual* for further information.

Best Management Practices (BMPs). A storm water Best Management Practice (BMP) is a technique, measure or structural control that is used for a given set of conditions to manage the quantity and improve the quality of storm water runoff in the most cost-effective manner. BMPs can be either engineered and constructed systems ("structural BMPs") that improve the quality and/or control the quantity of runoff such as detention ponds and constructed wetlands, or institutional, education or pollution prevention practices designed to limit the generation of storm water runoff or reduce the amounts of pollutants contained in the runoff ("non-structural BMPs"). No single BMP can address all storm water problems. Each type has certain limitations based on drainage area served, available land space, cost, pollutant removal efficiency, as well as a variety of site-specific factors such as soil types, slopes, depth of groundwater table, etc. Careful consideration of these factors is necessary in order to select the appropriate BMP or group of BMPs for a particular location.

Best Management Practices (BMPs), non-structural. Strategies implemented to control stormwater runoff that focus on pollution prevention, such as alternative site design, education, and quality maintenance.

Best Management Practices (BMPs), structural. Engineered devices implemented to control, treat, or prevent stormwater runoff.

Bio-detention. Detention facility designed to store and slowly release stormwater following a precipitation event by means of an excavated pond, enclosed depression, or tank with the use of vegetation to provide additional pollutant removal and filtering functions.

Bio-retention. Retention facility designed to allow infiltration of stormwater runoff into the ground with the use of chemical, biological, and physical properties of plants, microbes, and soils to provide additional pollutant removal and filtering functions.

Building Envelope. The internal area of a lot that remains after the minimum yard setbacks are applied.

Building Footprint. The area of a lot that is covered by parking structures, buildings, or other roofed structures.

Conservation Easement. Nonpossessory interest of a holder in real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic, or open space values of real property, ensuring its availability for agricultural, forest, recreational, or open space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archaeological, or cultural aspects of real property.

Effective Impervious Area (EIA). A subset of Total Impervious Area (TIA) that is hydrologically connected via sheet flow or discrete conveyance to a drainage system or receiving body. EIA contributes significantly to changes in hydrologic function of a watershed. EIA is determined by assessing the level of connectivity of each sublevel land use type (e.g., residential curb and gutter versus residential ditch system) and then tallying by percentage in each sub-watershed. EIA is more difficult to assess than total impervious area or mapped impervious area but provides a more precise measure of actual watershed imperviousness.

Eco-roof. A vegetated roof constructed for water quality and quantity control. Eco-roofs are vegetated roof covers with growing media and plants taking the place of bare membrane, gravel ballast, shingles or tiles. The number of layers and the layer placement vary from system to system and roof type, but all Eco-roofs include a single to multi-ply waterproofing layer, drainage, growing media and the plants, covering the entire roof deck surface.

Habitat Benefit Area (HBA). An area of land determined to provide a benefit to wildlife. Identification of HBA is accomplished by referencing the *Comprehensive Plan Volume III Habitat Benefit Area Map* that is included in the *Comprehensive Plan of the City for Beaverton Volume III: Statewide Planning Goal 5 Resource Inventory Documents*. Habitat resource classification and delineation methodologies are included in the *Comprehensive Plan of the City for Beaverton Volume III: Statewide Planning Goal 5 Resource Inventory Documents*. HBAs are in addition to any areas required for natural resource protection by other jurisdictional regulations.

Habitat Friendly Development Practice (HFDP). A development technique or activity that reduces detrimental impacts on fish and wildlife habitat resulting from traditional development practices.

Impervious Surface. A surface that cannot be penetrated by water and thereby prevents infiltration and generates runoff.

Impervious Area. The amount of impervious surface within a defined area.

Imperviousness. The percentage of all roads, parking lots, rooftops, sidewalks, and other impervious surfaces in a defined area.

Infiltration. The process or rate at which water percolates from the land surface into the ground. Infiltration is also a general category of BMP designed to collect runoff and allow it to flow through the ground for pollutant removal. The Environmental Protection Agency or Oregon Department of Environmental Quality may require additional permitting for infiltration facilities.

Low Impact Development (LID). A stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions. LID tools are designed to reduce environmental impacts of development, such as increased storm water runoff due to impervious areas, poor water quality and inconsistent water quantity in streams and rivers. LID techniques control storm water runoff volume and reduce pollutant loadings to receiving waters. Not all sites are suitable for LID. Considerations such as soil permeability, depth of water table and slope shall be considered, in addition to other factors. LID techniques may not completely replace the need for conventional stormwater controls.

Mitigation, Natural Resources. The reduction of adverse effects of a proposed project by considering, in the order: a) avoiding the impact all together by not taking a certain action or parts of an action; b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; c) rectifying the impact by repairing, rehabilitating or restoring the affected environment; d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action by monitoring and taking appropriate measures; and e) compensating for the impact by replacing or providing comparable substitute.

Natural Landscaping. The act of landscaping using plant materials that include groundcover and shrubs to cover bare earth and prevent erosion. Native plants, native-friendly plants and naturalized plants are recommended because they are adapted to the local environment and require little water and few chemicals to survive.

Parking, Tuck-Under. Tuck under parking is unenclosed parking located below the unit where parking is accessed from an open parking drive, at grade or below.

Rain Garden. Highly vegetated areas that are designed to detain or retain stormwater runoff while providing pollutant removal by the chemical, biological, and physical interaction of plants, microbes, and soils with water.

Rooftop Garden. A vegetated roof constructed for water quality and quantity control as well as passive recreation or active recreation or both.

Total Impervious Area (TIA). Total area of surfaces on a developed site that inhibit infiltration of stormwater. The surfaces include, but are not limited to, conventional asphalt or concrete roads, driveways, parking lots, sidewalks or alleys, and rooftops.

Tree Box Filter. Tree box filters are essentially 'boxed' bio-retention cells that are placed at the curb (typically where storm drain inlets are positioned). They receive the first flush of runoff along the curb and the storm water is filtered through layers of vegetation and soil before it enters a catch basin.

Tree Canopy. The shape of a tree produced by the outer most leaves. A tree's canopy cover is equal to the area within the drip line. The equation for determining tree canopy area is $3.1416 \times (r)^2 = x$ square feet (r being the radius from the center of the trunk to the drip line measured in feet). EXAMPLE: The tree canopy area for one tree with a radius of **20** feet will be equal to $3.1416 \times (20)^2 = 1,257$ square feet.

Tree Canopy, Mature. The expected size of the tree canopy at 10 years.